1966

An application of operations research to American legislation

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AN APPLICATION OF OPERATIONS RESEARCH TO AMERICAN LEGISLATION

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by

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Submitted in partial fulfillment
for the degree of

MASTER OF SCIENCE IN OPERATIONS RESEARCH

from the

UNITED STATES NAVAL POSTGRADUATE SCHOOL
October 1966

ABSTRACT

The scientific methodology of Operations Research is used to derive a philosophical model of man, and then, to demonstrate its application to the solution of American political problems. A cybernetic model is presented as a suitable framework for analysis of a political system. The necessity for continual innovation in a political system is demonstrated by analogy to the error-correcting feedback function in a communications network. Finally, it is attempted to show by probabilistic analogy that the only certain basis for net positive progress is control of decision-making processes by the freely expressed and broadly based preferences of an autonomous, informed citizenry. Throughout the paper an attempt is made to distinguish between inalterable goals on the one hand and opportune means for their attainment on the other.

DEDICATION AND ACKNOWLEDGMENTS

It is with sincere humility and apology for its many shortcomings, both acknowledged and unrecognized, that this thesis is dedicated to Professor Charles Chapman Torrance who convinced me that a thesis of this nature could be attempted using methods of Operations Analysis.

He is a teacher of the school which Will Durant has described as "loving life enough to let it humanize their teaching." His philosophy is one of constantly and urgently seeking better answers to the meaningful questions of life. Further, and perhaps more important, his teaching is characterized by a constant striving for new and better methods to apply to the search. But his greatest contribution, in an environment characterized by the search for practical answers to mundane, even minute, questions, has been the inspiration and challenge to ask better questions. His great talent, and his mission, has been to lead students to identify and illuminate the real issues in complex problems, so that their solutions are not hampered by irrelevancies.

Those who know Professor Torrance will quickly recognize that this attempt is not worthy of his challenge. To the extent that any light is shed, the credit is properly his. Where the mark is missed, the fault lies solely with the author.

The patience and encouragement of Professor William Peyton Cunningham, who acted as second reader, is gratefully acknowledged.

I am not an advocate for frequent changes in laws and constitutions. But laws and institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners and opinions change, with the change of circumstances, institutions must advance also to keep pace with the times.

--Thomas Jefferson

TABLE OF CONTENTS

Section		Page
1.	Introduction	7
2.	A Model for Decision	13
3.	A Philosophy of Values	22
4.	Relating Values to a Political Order	25
5.	A Cybernetic Model	34
6.	A Descriptive Analysis of American Legislative Institutions	39
7.	A Prescriptive Analysis	43
8.	Summary and Conclusions	55
9.	Bibliography	58

1. Introduction

Some of the outstanding characteristics of American legislatures are caution and conservatism, unwillingness to experiment, and inability to cast free from conventional ties -- all of which serve to preserve the status quo and prevent rapid response to new legislative requirements. Political patronage and emasculating compromise often supplant basic principles in the legislative processes. Reflection and reappraisal in the light of long range objectives is generally left to philosophers and political scientists whose pronouncements, though sometimes revered, seldom form the basis for systematic and purposeful analysis of existing and needed laws. Perhaps inefficiency is inevitable or even necessary to our political system. On the other hand, it is just possible that some of the impedementa we have inherited are no longer relevant (perhaps never were) and can be shucked off without detriment to the essential system. This paper is concerned not so much with the answer to this question as with the methodology of its analysis.

The rules of conduct established and enforced by a society have since the earliest recorded history been to a large degree formalized as laws or statutes. In a democratic society these laws are neither absolute nor static, but a dynamic evolution which is continuously remolded by the forces of social change. The purpose of this paper is to analyze the evolutionary process and to seek generic methods for its improvement. We shall call the process legislative and its product legislation, but the scope is by no means limited to the legislature per se. A democratic legislature shares power and responsibility for making authoritative social decisions (laws in the broadest sense) with the chief executive, the courts, the bureaucracy, the political parties, and the public (largely in the form of organized private interests). That is, if we consider law as the recorded rules of human behavior which can be read and known, and which are enforced by organized society, then we must include, in addition to the laws

passed by the legislature, the decisions of courts, the decrees and orders of the executive, and the regulations and rulings of administrative agencies. Thus the discussion and analysis of this paper will concern itself with the entire decision-making process which has variously been called "willfully or purposefully controlling men's actions and behavior",[1] "deciding who gets what, when, and how",[2] and "authoritatively allocating values for society".[3]

Although much of the paper will be addressed to a general decision-making methodology which should be equally applicable to legislation at any level (eg., national, state, and local) and in any democratic society, primary attention will be focused on the American National legislative process as it is practiced today. Our major concern is with the positive aspects of the political process -- defining proper goals and molding institutions and legislation for their implementation. The judicial review and interpretive role of the courts, albeit an essential potential force for the prevention of error, will be considered only at its periphery. For our purpose it will be assumed that "good" legislation and administration will minimize the necessity for the courts to exercise their steering and braking influence.

The environment within and on which the legislative process must operate is increasingly more complex: The crowding of populating into urban-suburban-industrial supercities with attendant increased social interdependence and stress shows no sign of abatement. The influence of the family as an agent for social direction and regulation is waning. Integration of the nation's industry and commerce, in addition to increasing the individual's mobility, demands extended regulation. The rising expectations of the lowest economic and social strata have created a foreboding unrest and a rash of civil disobedience in our

[1] Catlin, G.E.G., A Study of the Principles of Politics (London: Allen and Unwin, 1930)

[2] Lasswell, H.D., Politics: Who Gets What, When, How (New York: McGraw-Hill, 1936)

[3] Easton, D., The Political System (New York: Alfred A. Knopf, 1953)

larger cities. Increasing recognition of our supra-national responsibilities has broadened the base for legislative application. The rapid pace of scientific and technological advancement creates new dimensions for social decisions. For example, ingenious devices capable of furtive invasion of individual and corporate privacy proliferate; serious probing of previously inaccessible environments, both outer space and ocean depths, is a reality.

Our political institutions, at the heart of which lies the legislative process, will be sorely tried by the inevitable expanding scope and complexity of the social and economic problems which must be solved. Many questions arise! Can our Nation survive as an autonomous entity? Is our political process capable of the rapid and purposeful response to legislative requirements which will be required? If not, what changes are needed and are we capable (and willing) to institute them?

But there are deeper (and therefore more important) questions which many will avoid by asserting their answers to be axiomatic or self-evident. What is meant by National survival? Is it, in the final analysis, the preservation of an autonomous United States of America that we desire above all else? What price are we willing to pay? Perhaps it is our political heritage that must survive at all cost. All of it? If not, then which parts are essential? Political equality and popular soverignty? The Federal system (State's Rights)? Separation of Powers? The rule of Laws and not of Men? Or perhaps the essence is social -- or economic. Equality? In what sense? Laisseze Faire? Capitalism? Free Enterprise? Enthusiastic and emotional support could be rallied for any (and perhaps all) of these in any representative group of Americans. They are all to a greater or lesser extent incorporated in the hallmark of our proud heritage. The question becomes one of separating the means from the ends -- of discerning which are inalterable goals and which are simply methods which deserve our allegiance only so long as they contribute effectively to the higher purpose. Inheritance and long association are not proper criteria for

distinction. Do we dare admit the possibility that all may be simply means to some higher end toward which we strive (or should strive) endlessly? This point should be clear: The selection of Ultimate goals, or more clearly, the assignment of priorities to possible goals, must remain a subjective, (and for most a speculative), process. But having determined a goal, the means for its accomplishment can be selected somewhat less subjectively by a rational observer.

The reader may conclude, and not without some justification, that this paper is concerned with political science, philosophy, or even ethics rather than operations research or systems analysis. The writer has been much impressed by the inter-disciplinary methodology which is variously called operations analysis, operations research, and at some levels, systems analysis. This methodology, which is new only in its formalization as an integrated, general approach to complex problem solving, has grown out of rapidly increasing technological and scientific complexity which has so greatly increased the details bearing on management decisions as to render it virtually impossible to rely on traditional methods in prosecuting the objectives of modern organizations. Operations analysis has increasingly demonstrated its capability for helping management solve complex problems and make major decisions through application of a logical analytical methodology. There are few fields of greater complexity (and importance) than political science, or more specifically, governmental decision-making. In spite of (if not because of) the uncertainties, not only of the best methods of achieving political objectives, but also of what political goals should be (or even what they are), there is compelling motivation for an attempt to bring the scientific methodology of operations research (as well as all other available resources) to bear on the area of political decision-making. Admittedly, the applicability of operations research in its current form is limited. The variables of politics are in general, not quantifiable, rooted as they are in human behavior. Existing analytical techniques will require considerable

extension to deal effectively with the qualitative systems. But the essential spirit is applicable; it is the spirit of science.

The extent to which political analysis can be treated as a science rather than an art is a subject of considerable debate among contemporary students of politics. Political scientist Robert Alan Dahl of Yale University sees it as both:

> To the extent that many aspects of political analysis are most easily acquired by practice and training under the supervision of a person already skilled in political analysis, it is an art. Whenever students of politics scrupulously test their generalizations and theories against the data of experience by means of meticulous observation, classification, and measurement, then political analysis is scientific in its approach. To the extent that this approach actually yields tested propositions of considerable generality, political analysis can be regarded as scientific in its results.[4]

Operations research is not concerned with techniques of marginal improvement. Rather, it is concerned with major, even revolutionary, improvement.[5] That is to say, with optimal design of total systems, To the extent that we approach political analysis without prejudice for or against existing ideas or institutions, but are willing to examine the entire range of possible alternatives, and to the extent that we attempt to predict and compare short and long range values, effectivenesses, and costs of all alternatives in the hope that better understanding will lead to better decisions, we are engaged in operations research.

In a recent book on the subject, Eugene J. Meehan has this to say:

> Systematic human thought quite literally and necessarily implies a methodological foundation, and every attempt at intellectual criticism that moves beyond the bare confutation of data necessarily involves some reference to the terms of this substructure. Thought may proceed unaware of the methodological assumptions on which it rests;

[4] Dahl, R.A., Modern Political Analysis (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963) p. 2

[5] Johnson, E.A., Introduction to Operations Research for Management, by McCloskey, J.F. and Trefethen, F.N. (Baltimore: The Johns Hopkins Press, 1954) p. xx

it cannot proceed without the assumptions themselves.[6]

Later he speaks even more to the point:

> Modern analytic techniques, though they cannot offer "final" solutions to our problems, can most certainly provide the tools needed to clarify the nature of the enterprise, and stabilize the search for reliable knowledge; they have not been used to full advantage within the discipline [political science].[7]

[6] Meehan, E.J., The Theory and Method of Political Analysis (Homewood, Illinois: The Dorsey Press, 1965) p.1

[7] Ibid., p. 6

2. A Model for Decision.

This paper is concerned with making decisions in government. In politics, as in business and in personal life, decisions are influenced by certain appraisals which in the abstract are the same no matter what area or level (general or specific) is involved. Dahl has analyzed these aspects of decision-making in considerable detail.[8] His categories are:

1. The alternatives "open" or "available".
2. The likely consequences of each alternative.
3. The value assigned to the consequences of each alternative.
4. Estimates of the relative probability of the consequences.
5. Attitudes toward risk and uncertainty.

When the available alternatives and their consequences are known with certainty, (or near certainty), a "rational" decision can be made by the simple process of selecting that alternative which ranks highest on an "appropriate" value scale. The process might be called one of applying "common sense" to a selection opportunity. There is little need for an awareness of methodology -- the appraisals on which such a choice is based may be unconscious, virtually reflexive. The scale of values on which the consequences are ranked may be so deeply ingrained through habitual use as to seem beyond question, or even recall. Yet in spite of its simplicity, the essence of the decision-making process is illustrated by this example. To complete the picture, we need only introduce uncertainty. Uncertainty can and often does affect each of the first three categories and thereby renders the casual "common sense" approach ineffective. Each of the five categories is worthy of examination in understanding the complete model for decision.

The quality of a decision is inescapably a function of the extent

[8] Dahl, Op. Cit., pp. 94-100

to which the alternatives are known and explored. To be considered, an alternative must be known to exist, the actions which it specifies must be achievable, (at least with high probability), and it must be relevant (i.e., it must somehow be related to the scale of values to be used in the ranking). One of the important purposes of political analysis is to increase the range and awareness of feasible alternatives. Familiar alternatives may indeed be good, but it is often the case that a radically different approach offers order-of-magnitude improvement. Science, together with speculation and chance discoveries, opens up new alternatives (and often closes out old ones). Political philosophy offers countless imaginative speculation, much of it utopian, but nevertheless valuable in enlarging the range of alternatives. Yesterday's utopian thinking may well be tomorrow's conservatism.

The choices that people make among alternative courses of action in all spheres of life reflect their expectations or predictions concerning the consequences. Referring to our previous listing, the second and the fourth factors affecting the quality of decision-making are (under uncertainty) predictions based on factual or empirical knowledge. These are clearly dependent on the amount and validity of available factual information. The distinctive element of political phenomena is that they consist of or result from the actions of human beings. An effort to explain these phenomena is thus an effort to explain certain kinds of human behavior. But human and social behavior do not readily yield to predictive techniques. As a consequence, predictive knowledge used in making political decisions is often known to be at a relatively low level of reliability. Nevertheless, it is to this very need that the scientific method may have its greatest applicability. What is needed here, and we postulate not that it can be done, but only that it is well worth the attempt, is a descriptive, empirically-oriented, behavioral, operational or causal theory. Until very recently political theory has been virtually indistinguishable from

political philosophy; it has been oriented toward understanding the "true" nature of life. As David Easton puts it:

> Traditionally,....analysis of the moral rather than of the strictly empirical world has stood at the peak of theory's hierarchy of priorities....Recent developments in the overall orientation of political science, largely characterized by its reception of more rigorous methods of research and analysis, have led to a radical transformation in conceptions of the tasks and functions of theory. Not that this change involves rejecting or discarding any of the historical concerns of theory or for that matter of adding any entirely new dimensions. Rather, it has led to the injection of a new and stronger emphasis on concerns that out of neglect and untimeliness have been allowed to lie unattended....It now becomes possible for theory to escape the shackles imposed by so narrow a perspective and to broaden its scope to include a serious and systematic concern for descriptive theory. [9]

The goal is phrased clearly by Vernon Van Dyke of Stanford University:

> We can say that the purpose is to account for and, in so far as possible, predict political conditions and events.... The purpose should be to explain and predict -- to establish relationships between thought and action, means and ends, cause and effect, conditions and consequences.[10]

That the requirement has long been recognized is demonstrated by Hobbes' observation that the purpose should be to gain and impart "knowledge of consequences, and dependence of one fact upon another".[11] Or, as John Stuart Mill said, the part of the "scientific

[9] Easton, D., A Systems Analysis of Political Life (New York: John Wiley and Sons, Inc., 1965) pp. 4-5

[10] Van Dyke, V., Political Science: A Philosophical Analysis (Stanford, California: Stanford University Press, 1960) p. 4

[11] Quoted by Murray, A.R.M., An Introduction to Political Philosophy (London: Cohen and Weat, 1953) p. 93

observer and reasoner" should be "to show that certain consequences follow from certain causes and that, to obtain certain ends, certain means are the most effectual."[12]

One aspect of science should be emphasized in our discussion of descriptive theory. Science seeks to establish relationships between certain phenomena on the basis of knowledge already in our possession. It is concerned only with human perceptions to be ordered and arranged as best we can. It neither seeks nor requires any assertion about the nature of "reality" that goes beyond the ordering and classification of empirical or observable properties. Scientific theories and laws are not discoveries of "absolute truths" but human creations, conditional, approximate, and valid only so long as and to the extent that they serve useful purposes. When better explanations appear, old ones are absorbed or discarded; there are no final solutions. Science is characterized by a "skepticism" which refuses to accept any knowledge as complete or beyond question. In Meehan's words:

> Certainly the scientist would be delighted to have an all-encompassing logical structure in which every observation would fit nicely, but science has no way of knowing that such a structure is possible, and even if it were achieved, science would have no grounds for asserting the achievement.[13]

In the case of politics, knowledge is even more limited and partial than in the physical sciences. Scientific theories must be systematic, general and verifiable. Van Dyke comments:

> The problem for political scientists is that the more they insist on verifiability the more difficult it is to develop generalizations, and the further they go toward high levels of generality the more difficult it is to verify what is said. Roughly, the dilemma is whether to put the stress on saying what is important or saying what is true.[14]

[12] Quoted by Brecht, A., Political Theory (Princeton: Princeton University Press, 1959) p. 203

[13] Meehan, Op. Cit., p. 36

[14] Van Dyke, Op. Cit., p. x

But political decisions must be made punctually regardless of the level of scientific validity of our empirical knowledge. For others will decide for us what we fail to decide for ourselves. Thus, political decisions must, perhaps more often than not, be based on very incomplete factual information. This should not lead us to deny the role of science in the descriptive and predictive analysis of politics, but alert to its limitations, to wring from its methodology all the assistance and understanding which can be extracted.

Finally, in rational decision-making, values are of crucial importance. Without some criterion or standard against which to measure and compare consequences of various alternatives, rational choice is impossible. Even decision by the toss of a coin implies a value judgment in the sense that positive, purposeful goals are denied applicability. Of course values need not be articulate nor even conscious to be employed. When we buy an automobile we may be unable to state precisely what values we applied to arrive at the "best" choice between available models. Many people are only vaguely aware of the criteria they apply in choosing between candidates or propositions in an election. It should be clear that the quality of one's appraisals, and thus the "correctness" of the decisions toward which they lead, depends in large measure on one's values and one's capacity for applying these values to the various possible outcomes. The source of these values -- where they come from, and where they ought to come from, and by deduction, what they are and what they ought to be -- is the concern of political philosophy. This vital aspect of the decision process is taken up in the next section. For our present purposes, we may assume that ultimate values have been specified outside the decision-making process.

Assuming that we have determined "proper" values, or at least the best we are capable of, it is imperative to relate them rationally to an evaluation of the available alternatives. The concept of rationality used here was expressed by Dahl and Lindblom:

> An action is rational to the extent that it is "correctly" designed to maximize goal achievement....Given more than one goal (the usual human situation), an action is rational to the extent that it is correctly designed to maximize net goal achievement.[15]

In politics as in all endeavors, immediate, intermediate, and ultimate purposes are more likely to be achieved if they are identified. Even when they are identified they often receive little attention in the press of a multiplicity of more expedient considerations. Van Dyke comments on this point:

> It may not always be necessary for [legislators] to be articulate about the rationale of their activity. Those possessed with a good intuition or inspired by the right example may make good choices regularly even though they are no more than dimly aware of the criteria of judgment which they employ. In the main, however, it seems probable that choices will be better if they are made thoughtfully on the basis of explicitly formulated standards of judgment.[16]

And even more relevant to the legislative considerations of this paper:

> In the absence of a clear sense of purpose -- and a sense of logic which indicates what is relevant to the purpose -- legislation is likely to consist of a potpourri of unnecessary regulations or a robot-like imitation of a conventional pattern. Conventional patterns are sometimes quite good, of course. Purposeful and cogent thought may lead to their deliberate endorsement. The point here is that choices [relating to] purpose, whatever they may be, should be discriminating and not automatic or unthinkingly imitative.[17]

When ultimate goals are expressed (as they must be) at high levels of generalization, it is usually convenient, even imperative, to derive by logical deduction intermediate and immediate goals which are more nearly attainable than broad principles and which in summation

[15] Dahl, R.A. and Lindblom, C.E., Politics, Economics, and Welfare (New York: Harper, 1953) p. 38

[16] Van Dyke, Op. Cit., p. 3

[17] Ibid, p. viii

are estimated to provide the best means for promoting the ultimate goals under a given set of circumstances. The result is a structure of subordinate goals in which objectives at each level are not ends in themselves but rather means which are expected to contribute to achievement of objectives at the next higher level.

Herbert Simon describes the situation as follows:

> The fact that goals may be dependent for their force on other more distant ends leads to the arrangement of these goals in a hierarchy -- each level to be considered as an end relative to the levels below it and as a means relative to the levels above it....
>
> A means-end chain is a series of anticipations that connect a value with the situation realizing it, and these situations, in turn, with the behaviors that produce them. Any element in this chain may be either "means" or "ends" depending on whether its connection with the value end of the chain, or its connection with the behavior end of the chain, is in question.[18]

Kenneth E. Boulding [4] relates the famous story of a production manager who said that all he wanted to do was to minimize costs, until it was pointed out that the easiest way to do this would be to shut down operations altogether, in which case the costs would be reduced to zero. This illustrates that the fulfillment of subordinate goals can easily be inimical to the fulfillment of larger goals and ultimate values.

The problem is to maintain means and ends in proper perspective, examining each one regularly and carefully in relation to higher goals. Lacking this constant re-evaluation, what is initially endorsed as a method of promoting tacitly accepted values may come to be regarded as an end in itself, to the possible (and likely) detriment of the more correct goal. Even when values are stable, a set of rules that will

[18] Simon, H.A., Administrative Behavior, 2d ed., (New York: MacMillan, 1957) pp. 67, 102

maximize the attainment of these goals in one situation might be entirely unsuitable in another. Thus changing circumstances emphasize the need for continuous review of subordinate ends and means.

Analytic objectivity is essential for empirical inquiry and for subsequent descriptive and predictive analyses, but not to an extent which precludes reaching conclusions and answering questions. The tools and methodology of science and logic can be considered "value free" (except in that their selection places value on rational thought) and thus capable of objective analysis. Objectivity dictates the adoption of attitudes and practices that are generally accepted so that replication by other qualified analysts would lead to approximately the same results. Among these requirements are the following:

1. Use of generally accepted criteria in judging which data is relevant and reliable;

2. Thoroughness in locating and developing the data;

3. Use of generally acceptable criteria in assigning relevant significance to the data (i.e., weighting factors);

4. Rational, logical determination of the answers, if any, which the data will support.

An objective approach does not guarantee correct answers, but it does exclude, to the maximum extent possible, invalidation by systematic bias.

Postponing as we have the selection of goals for later consideration, the major portion of this section has been devoted to what might be called the descriptive analysis function of the decision-making process. We have been concerned with the observation of empirical facts, and development, based on these and other relevant facts, of correlative or explanative interrelationships within and among ends and means in a specified environment. Next we considered the predictive stage in which the empirically-derived functional relationship is applied to the feasible set of parametric alternatives. The hoped-for output of the analysis is a set of estimated measures of

value or value indices for each alternative, by means of which they may be compared. As the final step in the decision-making process, it is necessary to somehow order our preferences for the various measures of value, perhaps, for example, in the form of indifference curves. If this much can be accomplished, there remains only the mechanical-like process of selecting that alternative which offers the highest net attainment of preferred measures of value.

We have postulated that the methodology and attitude of science may be useful in enhancing the potential rationality of political action. It is clear that inductive and deductive logic will be the mainstay, as in the past. As to the handling of risk and uncertainty, formal logical systems such as game theory, decision theory and statistics (e.g., regression analysis, discriminant analysis, and factor analysis) are useful at low levels of generality when relevant variables are quantifiable on a common cardinal scale. As yet they do not appear to be amenable to the more crucial decisions at levels of generality which preclude additive measurements. Ordinal (indifference curve) analysis based on knowledge or specification of preferences, which is widely used in economics, may extend mathematical treatment to higher levels of generality. It is not unlikely that mathematics will develop techniques of even greater application to political science.

3. A Philosophy of Values.

Philosophy has attempted to answer questions concerning ultimate values and their source since earliest times. There remains a clear lack of concensus. The question is more than academic, for it would be difficult, if not impossible, to conduct an analysis of any political or social system without postulating a basis for ultimate value judgment. Indeed, rationality itself, as we have defined it, demands an answer. The unifying theme of this paper is that ultimate goals must be identified and continually distinguished from supporting intermediate and immediate goals, or better, means. In this section we shall examine several of the more prevalent philosophies and define one which will be applied in this analysis.

Dahl identifies five "hotly contested" philosophies of value which are currently prevalent:[19]

1. Political values must rest ultimately on God's will as determined by direct revelation to an individual or agent (as with Moses and the Ten Commandments) or indirectly by means of reason, intuition, or experience.

2. Political values must rest ultimately on natural laws, which may or may not be laid down by God. Knowledge of natural law is held to be acquired through reasoning or intuition.

3. Political values, like other values, can be derived solely by the methods of the empirical sciences.

4. Political values, like other values, rest simply on preferences i.e., values cannot be attributed to Divine will, natural law, or any "ultimate" justification outside personal preference. Whether this means that statements of values are "meaningless" is a source of division within this school.

5. Although values rest simply on preferences, certain kinds of preferences are probably universal, i.e., inherent in being human. Hence it should be possible to discover these universal preferences and to construct political systems consistent with them.

The first three positions postulate values that are "universal" while the fifth extends the fourth in the direction of a universal

[19] Dahl, Op. Cit., pp. 100-101

invariance. Representing as they do the distillation of centuries of philosophical probing by some of the world's best minds, there is apparent, at least to this writer, a marvelous harmony. If we take only their positive tenets we reduce the set of seemingly contrary philosophies to a small core of totally consistent doctrine which absorbs each of the individual beliefs without denying their separate validity. Taken in this manner, we might formulate the following composite, or better, unified philosophy of values in general and thus political values in particular:

1. Political values, like other values, rest ultimately on Divine will. That is, values are, at the highest level, absolute and unchanging.[20]

2. Values are reflected in natural laws, and are thus derivable and verifiable, within the limits of our powers of observation and inductive reasoning, by the methods of the empirical sciences.

3. Values are inherent in human nature (though perhaps often so deeply buried as to be imperceptible) so that human preferences, experiences, and even intuition, taken in the whole, give strong evidence of..."universal and invariant 'inescapable' elements in the human way of thinking and feeling about ethical values, and especially about justice".[21]

The philosophy just outlined is by no means new. The ancients patterned their positive law after natural law -- the law of the universe as observed in human behavior, or in science; and they considered this natural law as the product of a divine law which was the prototype. Division arose when contending philosophies, and science, interpreted natural law differently, and saw the link between natural and divine law in a different light (and sometimes in no light at all!).

The concept of absolute values which permeate the universe is at least as viable as other philosophical foundations, and capable of a wider range of explanation of observable phenomena. In accepting the

[20] As long as we remain outside the field of religion (as we shall in this paper) acceptance of God, or Divine will, per se, is not essential. The concept of a set of transcendent, unchanging laws which are inherent in the universe (i.e., in natural and human phenomena) is quite sufficient.

[21] Brecht, Op. Cit., p. 401

existence of Absolutes we do not violate the spiritual essence of science -- that theories are only human constructs. For we postulate an infinite framework within which empirical science is applicable. The existence theorem gives urgent motivation to scientific (and non-scientific) experimentation. At the same time, awareness of human limitations and propensity to error accentuates the need for the skepticism which characterizes science and is the sine qua non of progress. We might want to postulate, as a corollary to the existence theorem, an uncertainty principle which states that although we may make progress in that direction, our knowledge of the Absolute must remain incomplete and questionable in the finite universe. This is the philosophy which will be adopted and applied throughout this paper.

If this philosophy is correct, then empirical observation and analysis may be expected to verify and clarify which goals are more correct, at least within the particular environment of the observations.

The existence theorem has a vital effect on our willingness to conduct research at both stages of the decision-making process. In the first stage when we are building the range of possibilities, it demands that we exhaust the alternative ways of coming to know alternatives. At the second stage, in which the alternatives are subjected to value ordering, acceptance of absolute ethical values, no matter how imperfect our understanding, breeds dissatisfaction with currently fashionable objectives in the conviction that it may be possible to relate values to higher order goals (in the ethical sense).

4. Relating Values to a Political Order.

In a paper on government, then, the question becomes one of how to relate our postulated philosophy of values to political goals, institutions, and finally, decisions. More specifically, how can we best progress toward a goal which is not known and about which there is no general concensus?

Let us review our postulated position. There exists an absolute ethic which although not clearly identified, is universally reflected in human and physical nature. If we knew the nature of this absolute ethic (truth, ultimate value, goal, or whatever we choose to call it), it should clarify all issues and dictate all decisions, at least within our power to apply the rule rationally. But it is not known. Any individual may feel he has found the answer to the eternal question through religion, faith, intuition, or some other process. Indeed, each rational individual must act as though he knew the answer, for decisions are unavoidable. Some groups may agree for a time on fundamental goals, but difference of opinion is the more common human experience at all levels. But no individual and no group, can be <u>certain</u> about ultimate values -- nor about first principles of government. Yet, from our postulates, the priority of a search for first principles surpasses all mundane enterprise.

If there is a harbinger of hope in this sea of uncertainty, it is that "truth" is both universal and inherent in life. Surely there have been men, and others will follow, who, with dedication and studied perception, have glimpsed philosophic truths concerning the nature of man. We can only hope that such visions will become more frequent, more lucid and more widely accepted. Perhaps the inherent ethic gives mankind, taken as a whole over the very long view, some slight predilection to perceive and choose truth, at least when it is presented as an alternative through the offices of a visionary leader. Our only hope, however feeble, is to trust in man's collective good judgment.

The probability of progress, as we have described a possible

mechanism for its propagation, hinges on a delicate balance. From the theory of probability, we might say that such a system will, in the long run, produce more good choices than bad ones. Probability, however insists that the events whose relative frequencies are under consideration must be completely random. In our case, this would mean that the entire "population" (or at least a large enough portion to constitute a representative sample) must participate in the decision-making process.[22] Clearly, there may be large segments of any population who habitually make poor decisions. We might conclude, then, that one way (perhaps the only sure way) to ensure long-term, net positive progress is to allow each individual to be autonomous in his choices so that the probability law holds for the summation.

Such a conclusion, however impractical, has vast significance! Every individual's choices contribute equally (in the a priori sense of probability theory) to the overall increment of progress. There is no valid selection rule by which we may choose a smaller group of individuals whose decisions will approximate the progress available from the whole. Probability theory tells us that such a sample would have to be large, that it must be drawn by completely random processes from a cross-section of the population, and that we cannot have complete confidence that the representative group would produce as large a measure of progress. That is to say that every individual excluded from the decision-making process makes real progress potentially less certain.

Have we not developed, given our postulates, an undeniable rationale for human worth, dignity, and equality, and sufficient justification and urgency for the individual liberty which is so much

[22] An everyday understanding of the meaning of the probability terms involved is sufficient here, for the application is more allegorical than actual.

talked about and so little understood (and practiced)? Is this not a sufficient basis for Jefferson's "self-evident truths" and his opposition to tyranny? Not only is every individual entitled to his own opinion and the right to express it, but every man's opinion is vital to the only sure process by which the knowledge and practice of truth can be advanced.

But the real world does not (yet) permit a utopian society in which each individual is autonomous. Except in complete isolation, individual decisions are not independent. Conflicts develop over mutually interfering goals. Powerful individuals and groups enforce their views, disrupting the "random" decision process. We need not analyze here the reasons why men choose to live together in relatively large social groups. It is sufficient for our purposes to observe that they do, and that they require governments to provide a mechanism by which conflicts can be resolved. It is significant that men voluntarily form governments, which place restrictions on their freedom, in order to preserve their individual autonomy. Herein lies the age-old dilemma of government -- the delicate balance between governmental power and individual liberty. Will Durant, in writing of Spinoza's Treatise on Politics, describes the exchange concisely:

> Part of the individual's natural might, or sovereignty, is handed over to the organized community, in return for the enlargement of the sphere of his remaining powers.[23]

Having decided upon the requirement for government, a people have an almost unlimited spectrum of forms and degrees from which to choose, although their culture and circumstance usually narrow the choice greatly. Much has been written in the attempt to clarify and classify the fundamental characteristics which distinguish one government from another. There is neither the need nor the space to cover

[23] Durant, W., The Story of Philosophy (New York: Pocket Books, Inc., 1953) p. 192

such an analysis here -- even were the writer equipped for the task. Only one dominant characteristic will be considered -- the degree of control which ordinary citizens exert over the decision-making process. At one end of this scale is literal majority rule with each citizen exercising an equal vote on every issue, which process is usually called pure democracy. At the other extreme, of course, lies absolute monarchism, in the purest form of which no citizen has even remote influence except, perhaps, at the pleasure of the ruler. Neither of these extreme forms exists. In the very special type of representative democracy which has developed in the United States, decisions are made by a small group of elected and appointed officials. The degree to which these officials are controlled by ordinary citizens is, again, the subject of controversy. To a large extent, the remainder of this paper is devoted to a consideration of this characteristic of American democracy. The point to be made here is that in any practical governmental scheme, it would appear that, at least in the very short run, rule is by a minority -- a very small minority. This is not a criticism, but simply an empirical fact.

It might be more convenient for purposes of analysis to modify our definition of the basic functional classification and distinguishing characteristic of government. Our premise is that every government, sooner or later, is subject to control by the majority. Indeed, the majority may refrain from exercising its potential control for many reasons, among which are: lack of awareness of their capability, lack of leadership or organization, fear of reprisal in the event of failure, lack of a better alternative, indifference to political matters, and satisfaction with the existing order. The instrument of innovation may vary from gentle persuasion to bloody revolution, and the period of contention may span centuries. But a majority, given sufficient exacerbation, can always, in time, effect a change!

If this principle is allowed, we may redefine our standard in terms of the amount of force and the time required for a majority to bring about

desired reforms. The criteria might be visualized as one of responsiveness. Attention is focused on mechanisms for deciding how far, or how long, to allow one regime, system, party, or faction to determine the course of political enterprise, and the measures necessary to alter a direction once embarked. As an aid to classification and analysis, this standard appears to offer great flexibility over the full spectrum of governmental types and levels. For example, it is not limited to consideration of majority goals, but can be applied equally well to analyze the degree of influence and control available to minorities both within and outside an existing "ruling minority". We turn now to consider the desirability of this characteristic, which we have called "responsiveness", keeping in mind the specific definition which was made.

It is fortunate for politics that men, at least some men, are endowed with a desire for power. The desire is often accompanied by, if not engendered by, the highest humanitarian and ethical motivation. Willing leaders, then, will arise out of endowment and circumstance. Their quality will, of course, vary, both in capacity and vision. We must assume that, in a society which is free to choose its leaders, wide participation in the selection process will, on the whole, result in good leaders. This follows from the law of probability and our postulate that truth is inherent, even intuitive, and universal in life.

That the widest possible participation is necessary in the selection of leaders should be clear. For if selection is restricted to a few who are permitted to perpetrate a "ruling class", inbreeding will accentuate their prominent features -- weaknesses as well as strengths. Decisions made by such a restricted group will not be protected from error by action of the probability law. In truth, however, the law does say that eventually a misdirected leadership will be overcome by an enlightened majority. But the arrangement is clearly not an effective design for progress.

Historically, it is clear that power distorts perspective, and visions fade in the exigencies of action. Leaders appear to be almost invariably changed by the act of ruling, like a bright star which is deviated from its true course by recoil from its own radiation. Each leader in turn takes up the torch to guide a people who eventually, if not unerringly, sense (with widely varying reaction times) when each has served his usefulness. Then, by whatever means his culture and institutions permit, the old leader and vision, now faded, outworn, or even onerous, are replaced by the new. The process does not preclude bad leaders and false visions, both fraudulent and well-intentioned, but the same rule applies to their overthrow. Each new tack does not necessarily provide the needed corrective action -- there may be long stretches of digression. But the hope is that over the long run, positive progress will result.

An effective political system must provide for timely and orderly selection and replacement of leaders. But the need for responsiveness is much broader. The requirement encompasses the entire "ruling minority". In the American system, there is similar need for responsiveness throughout the executive branch, in the Congress, in the bureaucracy, and even in the courts. Further, the responsiveness principle must be nurtured <u>within</u> the ruling minority to provide for effective corrective influence before wholesale replacement becomes necessary.

Supremacy of the individual dictates political responsiveness at even more fundamental levels. Established institutions and practices, social, economic, and political, cannot be maintained as a matter of nonrational, emotional faith, but must be considered as methods or instruments concerning which there should be rational discussion and appraisal. George Santayana, one of America's great philosophers, had this in mind when he wrote"

> To love one's country, unless that love is quite blind and lazy, must involve a distinction between the country's

> actual condition and its inherent ideal; and this distinction in turn involves a demand for changes and for effort.[24]

Jefferson, who more than any other was responsible for American sensitivity to libertarian considerations, said in his Second Inaugural Address:

> If there be any among us who would wish to dissolve this Union or to change its republican form, let them stand undisturbed as monuments of the safety with which error of opinion may be tolerated where reason is left free to combat it.[25]

Much more could be said to support and illustrate this principle, but the point should be clear. Governments are designed to serve individuals. No political system, institution, or nation is worthy of preservation, however venerated by familiarity, or even past success, unless it offers freedom for the individual to develop in accordance with the dictates of his own reason.

It has been said that "democracy is the political aspect of the assertion of the supreme importance of the individual".[26] To the extent that this remains true of American Democracy, we must devote our energies, even our lives to its preservation. If it becomes perverted or distracted by less worthy goals, then we must reform it, or else denounce it entirely. And, if another political order appears, on rational analysis, to offer promise of greater self-fulfillment for the individual, then we must be willing to experiment.

This bring us logically to a second requirement for a political order under our philosophy of values. It is a natural extension of the first, and forms the basis for positive governmental action, as opposed to the essentially negative role of regulator and adjustor, i.e., defining the limits of a citizens actions, and preventing and settling

[24] Ibid., p. 502

[25] Levy, L.W., Jefferson and Civil Liberties; the Darker Side (Cambridge: The Belknap Press of Harvard University Press, 1963) p. 172

[26] President's Commission on National Goals, Goals for Americans (New York: Prentice-Hall, Inc., 1960) p. 53

conflicts between individuals and groups of individuals. We have seen that this negative function attempts to maintain, to the greatest extent possible, the autonomy of each individual in the belief that there is no other certain means to real progress. The positive role arises from the asperation that man's progress toward his unknown goal can actually be accelerated by additional governmental action, over and above that required for the preservation of individual autonomy. The concept is that growth can be stimulated and latent potential brought forth by creation of a favorable environment.

It might be helpful to visualize one aspect of human life as a mammoth, continuing experiment which is the summation of many individual and group experiments. Then we can say that the first function of a political system is to insure that each individual is free to conduct any experiment he finds attractive, subject only to the restriction that no experiment should be favored to the exclusion of another. Our development precludes enforcement of any authoritative judgment about which experiments should be conducted or how they should proceed. The second governmental function, then, is enhancement of the capacity of each experimenter by broadening his horizons and providing more and better working tools. This is the true basis for governmental activity in such fields as education, welfare, economics, housing, transportation, and communications, which has expanded so greatly in the last few decades.

The second area of governmental activity is clearly more difficult than the first. For the distinction between legitimate growth stimulation and tyrannical enforcement of authoritative parochialism is easily confused or overlooked entirely. But this is precisely the point. Santayana has said that a society must be judged by the measure in which it enhances the life and capacities of its constituent individuals.[27] Is this not, in the final analysis, a necessary and

[27] Durant, Op. Cit., p. 504

sufficient measure of effectiveness for any political order? For example, in the matter of governmental regulation of the business community, decisions must not be based simply on such considerations as the effect on the national product, a tradition of free enterprise, or even, the supposed intentions of the framers of the constitution. Even the widely accepted goal of a continually increasing "standard of living" requires analysis on the basis of its impact on individual self-fulfillment.

In summary, we have developed two functional bases for a political order and the laws and decisions it enforces. First, in the absence of certain knowledge about ultimate goals, it follows that the first requirement is to safeguard the freedom of each individual to apply his own specific hypotheses and experimental procedures to the solution of problems, subject only to the restriction that he must not by so doing deny equal freedom to others. The second requirement is stimulation of growth to insure not only that experimentation does not cease, but that it expands in scope and quality as the store of human knowledge increases. The responsiveness principle which was developed earlier should be seen to be a necessary condition for the effective accomplishment of these two objectives, i.e., the political system must not only permit peaceful change, but <u>seek</u> its purifying influence as an antidote for error.

5. A Cybernetic Model.

Karl Deutsch, Professor of Political Science at Yale University, in his book, The Nerves of Government, offers a theoretical model of a political system derived from the theory of communication and control (often called by Norbert Wiener's term "cybernetics"). Deutsch makes an interesting case for a concept of government as more a problem of steering capability than of power structure; and he shows rather convincingly that steering is decisively a matter of communication. Our principle of responsiveness has direct application in Deutsch's model in terms of feedback control.

Cybernetics, the systematic study of communication and control in organizations of all kinds, is a conceptual scheme which represents a shift in the center of interest from drives to steering, and from instincts to systems of decisions, regulation, and control, including the noncyclical aspects of such systems.[28] Deutsch expands the concept as follows:

> The viewpoint of cybernetics suggests that all organizations are alike in certain fundamental characteristics and that every organization is held together by communication....It is communication, that is, the ability to transmit messages and to react to them, that makes organizations; and it seems that this is true of organizations of living cells in the human body as well as of organizations of pieces of machinery in an electronic calculator, as well as of organizations of thinking human beings in social groups.[29] [underlining supplied]

Is this not an essentially similar concept to that which we have called responsiveness? The superiority of such a cybernetic model over the classic models of mechanism, organism, and process lies

[28] Deutsch, K.W., The Nerves of Government (London: The Free Press of Glencoe, Collier-Macmillan Ltd., 1963) p. 76

[29] Ibid., p. 77

in its incorporation of learning and self-modification. Deutsch explains:

> All three of these [classical] models have long been felt to be inadequate. Mechanism and the equilibrium concept cannot represent growth and evolution. Organisms are incapable of both accurate analysis and internal rearrangement; and models of historical processes lacked inner structure and quantitative predictability.
>
> In the place of these obsolescent models, we now have an array of self-controlling machines that react to their environment, as well as to the results of their own behavior; that store, process, and apply information; and that have, in some cases a limited capacity to learn.[30]

The cybernetic model may be visualized as a self-modifying communications network or "learning net". The concept of "feedback" is common to all self-modifying networks, whether they are electronic control devices, nerve systems, or social organizations. Deutsch points out that a system which incorporates feedback is often called a servomechanism, and defines it as a [31]

> ....communications network that produces action in response to an input of information, and <u>includes the results of its own action in the new information by which it modifies its subsequent behavior</u>. A simple feedback network contains arrangements to react to an outside event in a specified manner until a specified state of affairs has been brought about....If the action of the network has fallen short of reaching fully the sought adjustment, it is continued; if it has overshot the mark, it is reversed. Both continuation and reversal may take place in proportion to the extent to which the goal has not yet been reached. If the feedback is well designed, the result will be a series of diminishing mistakes -- a dwindling series of under- and over-corrections converging on the goal. If the functioning of the feedback

[30] Ibid., pp. 79-80

[31] Feedback, as developed and used in this paper, is often termed negative feedback in the sense that signals from the goal are used to restrict outputs which would otherwise go beyond the goal. Positive feedback has more limited application and is not a concern here.

> or servomechanism is not adequate to its task (if it is inadequately "dampened"), the mistakes may become greater. The network may be "hunting" over a cyclical or widening range of tentative and "incorrect" responses, ending in a breakdown of the mechanism.[32]

Deutsch describes three kinds of feedback:

> "Goal-seeking", the feedback of new external data into a net whose operating channels remain unchanged; and "learning", the feedback of external data for the changing of these operating channels themselves.... [and] the feedback and simultaneous scanning of highly selected internal data, analogous to the problem of what usually is called "consciousness".[33]

In a specific application to our concern with a political order, the first type of feedback corresponds to the direct response of a political system, for which goals are essentially fixed, to the collective demands of the electorate. It produces relatively short-term solutions which have application only within the specific environment. Contrary to popular opinion, but strictly in keeping with the theme of this paper, it is interesting to note that Professor Nicholas Rashevsky, who applied sophisticated mathematical techniques to an analysis of socio-political models, found that a high degree of conformity in demand (resulting from a low proportion of politically active individuals) may tend to reduce the stability of a political system.[34]

The "learning" variety of feedback involves more complex response to changing environments, including readjustment of those internal arrangements that determined its original goal, so that the political system may change its goal, or set new goals, which it must then attempt to reach by a process involving goal-seeking feedback. This

[32] Ibid., pp. 88-89

[33] Ibid., p. 97

[34] Rashevsky, N., Two Models: Imitative Behavior and Distribution of Status, in Lazarsfeld, P. F., ed., Mathematical Thinking in the Social Sciences (Glencoe, Ill.: The Free Press of Glencoe, 1954) pp. 67-104

process often includes changes in the "operating rules" that determine how decisions are reached, and may result in modified or new political institutions. It is significant, but not surprising, to find that the learning capacity of a communications net, or a culture, is closely related to its ability to survive and to spread.

The third type of feedback is a secondary device for improving the efficiency of both the goal-seeking and the learning processes by means of perceptive internal monitoring of information and relationships existing within the network.

The cybernetic model then appears to be valuable in as much as it provides a framework for understanding and analyzing a political system as a dynamic whole. Feedback controls provide a means for representing the capacity for self-steering autonomy, i.e., the self-changing and self-enhancing mechanism, which is essential for long-run survival of any system or organization in an environment which can be expected to change continually and considerably.

Our philosophy of values leads us to accept Deutsch's hypothesis that:

> ....No autonomous organization can remain indefinitely self-sufficient by means of the set of data and resources it commands at any one moment, or even by means of the set of data and resources it has got into the practice of receiving at any one time from its environment....[The concept] implies the eventual insufficiency of all current, as well as of all predictable, routines for the preservation of autonomy.[35]

It follows that a primary function of politics must be the development of a range of significant techniques for accelerating needed innovation. Previous sections of this paper have implied this requirement and hinted at possible means for its accomplishment. In the final section we shall develop what are perhaps the three most important of these

[35] Deutsch, Op. Cit., p. 238

techniques, at least in Western politics, which are majority rule, the protection of minorities, and the institutionalization of dissent.

6. A Descriptive Analysis of American Legislative Institutions.

The legislature is an inseparable part of a larger political system. Its character and function cannot be understood in isolation, but must be viewed within an elaborate network of external relations, some of which it has designed and developed for its own purposes and others which have been thrust upon it involuntarily. In purely constitutional terms, the American legislature is placed at the center of the political system, having been awarded the principal tasks of government and a major share of the powers presumed necessary to perform them. But the framers of a constitution, no matter how detailed their prescriptions, can do no more than outline the contours of power. Power relationships among the branches of government and between the government and private power systems are both complicated and fluid; a document cannot protect power or insure initiative. The outcomes of policy struggles are affected as much by the power of particular men and the force of circumstance as by the broad language of the constitution.

Although it is by no means a purpose of this paper to assess or even to trace the evolution of our Federal system, it is necessary to understand the relationships which exist today between the National Government on the one hand, and the constituent States on the other. The conception on which the recent and expanding social and economic legislation professes to rest is one which has been called cooperative federalism,in which the States and the National Government are regarded as mutually complementary parts of a single governmental mechanism all of whose powers are intended to realize the current purposes of government according to their applicability to the problem at hand.

Two consequences are worthy of note here. First, it has been argued that the cooperative conception of the federal relationship, especially as it is realized in the policy of federal subsidy to the states, tends to break down state initiative and to devitalize state

policies. Actually, its effect has often been just the contrary in as much as the states, competing as they do with one another to attract investors, have not been able to embark separately upon expensive programs of relief, social insurance, and sometimes even public education. Thus, the uniformity born of National initiative has often freed the States for creative experiments within the broad scope of national policy. On the other hand, it is unquestionably true that cooperative federalism invites further aggrandizement of national power. Resting as it does primarily on the superior fiscal resources of the National Government, cooperative federalism has become, for better or for worse, a synonym for steadily increasing power of the National Government in the stimulation and supervision of local policies.

The second great structural principle of American Constitutional Law is the doctrine of Separation of Powers. The notion of three distinct functions of government approximating what we term the legislative, the executive, and the judicial is at least as old as Aristotle. Montesquieu incorporated the concept of "checks and balances" which the framers of our Constitution believed necessary to prevent a single segment of the population -- majority or minority -- from gaining complete control of the government. Further, they insured that a variety of interests would be reflected by making each branch accountable to different groups. A corollary to this doctrine was the principle that legislative power cannot be delegated. However, the Supreme Court has recognized that in the face of the complexity of the conditions that Congress is called upon to regulate, it is impossible for that body to make all policy decisions. Accordingly, it is now sufficient that Congress set down a general policy and authorize administrative officials to make rules to carry the general policy into effect. Thus the Court has sustained numerous statutes granting in the total vast powers to administrative and executive agencies such as the Interstate Commerce Commission and

the Federal Communications Commission. Congress, however, always retains the power to rescind its delegation or to alter the policies enacted by those to whom it has given quasi-legislative discretion.

The constitutional separation of powers has been altered by another significant development -- the President's expanding role as chief legislator. Today the President is expected to have a legislative program of his own and to use his powers and prestige to secure its adoption by Congress. In the interest both of unity of design and of flexibility of detail, presidential power today takes increasing toll from both ends of the legislative process -- both from the formulation of legislation and from its administration. It appears that as a barrier capable of preventing fusion of presidential and congressional power, the principle of the Separation of Powers has not retained much of its original effectiveness.

As we have seen earlier, government, and especially democracy, is fundamentally concerned with the relationship between the powers of government and the liberties of individuals. Though both are necessary, authority and liberty oppose each other in such fashion that the growth of one of them implies the decline of the other. Dr. Edward S. Corwin summed up the position of the United States constitutional system in 1953:

> What was once vaunted as a constitution of Rights, both State rights and private rights, has been replaced to a great extent by a Constitution of Powers. The Federal System has shifted base in the direction of a consolidated national power; within the National Government itself there has been an increased flow of power in the direction of the President; even judicial enforcement of the Bill of Rights has faltered at times, in the presence of national emergency.[36]

Recent years have seen continued Presidential ascendancy tempered,

[36] Senate Document No. 39, 88th Congress, The Constitution of the United States of America -- Analysis and Interpretation (Washington: U.S. Government Printing Office, 1964) p. 23

and even assisted, by a Supreme Court dynamically asserting individual liberty, as originally defined by the Bill of Rights, subsequently extended by the Fourteenth Amendment, and continually expanded by the Court itself.

We turn now to a brief analysis of existing institutions and current trends, in which we may find cause for both hope and concern. The analysis with which this paper will conclude is neither comprehensive nor greatly detailed. It is intended to be only an illustration of the type of rational (in the sense defined earlier) analysis for which our preliminary emphasis on basic principles has prepared a foundation and a scientific methodology.

7. A Prescriptive Analysis.

Our philosophy of values has led us to adopt supremacy of the individual as the guiding principle of government. We have concluded, first, that the state must limit the powers of its citizens only as far as these powers are mutually destructive -- it must withdraw no liberty except to add a greater one. Secondly, we have concluded that government must create conditions which enhance each individual's capacity for growth. It must do this without denying him dignity -- without depriving him of autonomous control over his behavior - allowing each individual to determine his own rate of learning and his own priority of effort. Finally, since government must survive in order to perform its function, we have concluded that it must be capable of rational, autonomous (self-determined) innovation of its own structure as its environment and its citizens change. Underlying and supporting the entire development has been our postulate that in a world of absolute, universal and observable ethics, the collective choices of mankind will, over the very long term, be good choices whenever individual preferences are freely expressed and broadly reflected in the decision processes.

However, we cannot assume a standard of excellence which is above ordinary persons. The form of a political system must be one which states and individuals can attain. General principles are not easy to apply to hard, concrete cases. Therefore, these principles must be related to specific means for implementation, i.e., to institutions, laws, and public officials, for example. But what means should we adopt? We should be very skeptical about the existence of an ideal form of government; there is ample evidence that optimal solutions in the real world are not unique, even in a specified environment. We might say that democracy, to the extent that it supports supremacy of the individual, is ideal. But this implies little about its tangible form. What we must have is a means for making decisions. For unless all members of a society agree on all policies all the time,

there must be a set of rules for settling conflicts. In considering the American political system, the question we must ask, and ask continually, is whether our decision-making processes are consistent with the principles we have developed so carefully.

At the highest level, the American scheme for decision-making might be described as one of majority rule, constrained by protected minorities and institutionalized dissent. Although this is not the only decision rule compatible with our principles, it does appear to offer a framework within which our objectives can be realized. Clinton Rossiter comments that the American process has been one of

> ....arriving openly, through discussion and compromise, at decisions in keeping with the reasonable wishes of the majority, and then of pursuing these decisions with the fullest possible respect for the legitimate rights of the minority.[37]

Deutsch suggests that autonomous organizations may be prone to overvalue internal or parochial information, as well as familiar data from the past, as against data and information derived from new and wider ranges of experience. Majority rule, as opposed to decision processes requiring a higher degree of agreement, offers greater responsiveness to needed innovation. Deutsch makes the point clearly:

> Majority rule in the Western manner permits....a change to be carried out much earlier and thus much faster. At the same time, Western traditions for the protection of minorities may prevent majority-imposed rates of change from disrupting the integrity and dignity of dissenting individuals or groups, or of breaking the bonds and communication channels of social cohesion. Finally, the institutionalization of dissent, and the provision of acceptable channels and modes for the expression of criticism and self-criticism, of counterproposals and of new suggestions, protect not merely the majority of

[37] Rossiter, C., The Democratic Process, in Goals for Americans, Op. Cit., p. 61

> yesterday but also provide potential growing points for the majorities of tomorrow. Taken together, majority rule, minority protection, and institutionalized dissent, reinforced by highly conscious, analytical, critical and combinatorial modes of thought, provide Western societies and political systems with an unusually wide range of resources and instrumentalities for rapid social learning and innovation.[38]

The question of majority rule versus minority rights is not easily resolved. Robert G. McCloskey suggests that there is a basic ambivalence in American politics which steadfastly refuses to resolve the inherent contradiction between the two ideals. One of his illustrations gives good insight into the kind of subtle relationships which characterize the American political system, especially the legislature:

> ....Congress....must surely be one of the most curious repositories of paradox that ingenious political man has yet devised. This was an agency set up to express the will of American democracy, and we might legitimately expect that the institution would reflect the nation's answer to the eternal democratic question about majority rule versus minority rights. But it gives us no such answer, unless the failure to provide one is a kind of answer in itself. In the first place, as everyone knows, the very creation of the two houses involved a contradiction: the House was dedicated to the proposition that the majority must rule; the Senate, to the idea that minority rights are sacrosanct. But it goes far beyond that. Within each of the two houses we find the same contradiction embodied. Consider, for example, the Senate's famous filibuster tradition. Under the present rule, the vote of two-thirds of the Senators present is necessary to halt debate and no limit at all can be imposed on debate on a motion to change the rules. Thus the minority enjoys, theoretically, an absolute power to frustrate the will of the majority. But on the other hand, there is no real doubt that a majority vote of the Senate could kill the filibuster rule tomorrow -- including the rule that purportedly forbids cloture on a rule change..

[38] Deutsch, Op. Cit., pp. 254-255

> The Constitution gives each house the right to determine its own rules and that right is lodged in the majority of the Senate. So what we have here is not a choice between majority rule and minority rights, not even (in theory) a compromise between them, but an absolute representation of both ideas.
>
> A similar paradox is mirrored in the procedures of the House. We hear much nowadays about the Rules Committee and its power to prevent the majority from expressing itself, a power analogous to that of a filibustering minority in the Senate. Yet a discharge petition signed by a majority of the House can at any time wrest a bill from the Committee's grasp and thus override the minority. Again we see the idea of majority rule and the idea of minority rights existing side by side. In practice, of course, in both Senate and House the two ideas are often compromised. The minority refrains from exercising its theoretically absolute veto unless the issue seems really vital to minority interests; in return for such self-restraint the majority does not invoke its own absolute power to override. But apparently there is symbolic value in maintaining the formal existence of the essential paradox. It comforts those who believe in both majority rule and minority rights and have never bothered to choose between them.[39]

McCloskey has no real quarrel with this so-called ambivalence, nor should we. Later he says:

> The literature of American political thought, our political institutions, and our political behavior all indicate that our ideology may be a conglomerate of mutually inconsistent beliefs. If so, it may be idle to seek for "the" American tradition, for a "consensus" in any usual sense of the word. Perhaps our only really basic quality of mind is the pragmatic spirit that can tolerate such a state of affairs and build an enduring polity upon it.[40]

[39] McCloskey, R.G., The American Ideology, in Irish, M.D. (Ed.), Continuing Crisis in American Politics (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963) pp. 20-21

[40] Ibid., p. 24

But McCloskey only hints at the fundamental significance of the phenomena he describes so well. He seeks idological consensus at too low a level in the means-ends chain. Neither majority rule nor minority rights are proper goals in themselves. Neither, for that matter, are "separation of powers" nor inalienable "States Rights", nor any of the other so-called checks and balances which we have inherited. They are but devices, albeit ingenious devices, which have from time to time been found useful in preserving the supremacy and the autonomy of the individual. Viewed in this light -- as means, rather than ends -- there is no inconsistency and no basis for valuing one higher than another.

Again we have come to the crux of the matter -- all that has come before and all that follows in this thesis has been dedicated to demonstrating a need and a method for distinguishing between inalterable goals on the one hand, and opportune means for their attainment on the other. Irrational devotion to a specific institution or system in isolation from the higher purpose is equivalent to blockage of the external feedback channels of a communications network which results demonstrably and inevitably in instability of the system and eventual loss of autonomy.

Let us consider briefly the highly emotional issue of "states' rights". Are we not able to conclude immediately and unquestionably that states, per se, have no inherent, no inalienable, rights? To the extent that legislative decisions at the state (or local) level best provide for individual fulfillment, a states' rights concept is justified. If a high degree of autonomy in the state governments is necessary and effective to prevent tyrannical regimentation by the National Government, then we should support and perhaps even increase the powers of the states. But when we champion states' rights we must be sure that our basis is increased responsiveness of legislation to the collective will, and not, for example, maintenance of the

status quo according to the preferences of an unrepresentative minority in whose hands the balance of state political power often resides. We must not fear innovation, but welcome it as essential to growth, and thus progress, even survival.

On the question of currently expanding Presidential influence in the legislative process, there is perhaps greater cause for concern. The fear is not violation of the "sacred" doctrine of "separation of powers", but, again, loss of responsiveness. Despite the wide base of political support necessary to elect a President, the Executive branch of government is remote from the channels of public communication. Election of a President, even by a decisive margin, does not necessarily constitute a popular mandate for the President's or his party's platform. For the electorate is permitted only to choose between predetermined alternatives -- all of which it may consider unhappy ones. Furthermore, the policies and programs of a President may diverge rapidly from his election-year platform. Four years of essentially free rein, with Congressional action limited largely to approving or rejecting predetermined legislative packages of vast and lasting consequence, is hardly a blueprint for progress. Our principle of progress through broad participation requires that significant policies and programs be chosen rationally after widespread study and intercourse concerning alternatives. It is perhaps possible for a miniaturized version of such a process to operate on the natural diversity available within the Executive branch of the government. But even if the eventual legislative product were rationally perfect, bypassing the (two-way) channels of public communication, and elimination of the reflective and educational processes would result in an ever broadening gulf between individual preferences and legislative action -- which is, by our definition, the kind of unresponsiveness that brings instability and failure to a cybernetic system. Autonomy of the individual and human dignity are not consistent with the imposition of generally unwanted

legislation, no matter how "rational" it may seem to an "enlightened" minority. If the minority opinion is indeed rational, it can (and will eventually, we postulate) become the majority opinion; the vehicle of change is communications, in its broadest sense. It would appear, then, that it is a necessary function of the Congress, with its inherent diversity of interest and opinion, to participate actively and publicly in the formulation of policies, programs, and legislative alternatives, providing, as it were, a public information center and national forum for the exposition and evaluation of conflicting ideas. The proper legislative function is largely one of communications to and from the electorate;[41] and it is this function which Executive legislation appears unable to provide. To argue that the slow processes of Congressional debate and reflection are inefficient luxuries which the demands of the modern age will not permit, is to misunderstand the true meaning of efficiency, or to assert that the goals and policies of a restricted group are, or can be, sufficiently correct to pursue them unhesitatingly. Such an approach gains rapid response by restricting its information and feedback channels. It can be tolerated during short periods of crisis, but becomes self-destroying if adopted as standard procedure.

This argument has direct application to the tendency toward secrecy and censorship. Communication of preferences of individuals and groups to the "governing minority", with responsiveness at every level, and, communication from government to its citizens of factual information concerning internal and external conditions, are both vital for prevention of error. Blockage of the first path is oppression of dissenting opinion, against which a sufficient case has been made.

[41] Woodrow Wilson called this function "clarifying public business for public comprehension", Constitutional Government in the United States (New York: Columbia University Press, 1908), p. 135; David B. Truman describes the chief function of legislative debates as "part of the process of adjustment" facilitating "acceptance of the final decision, not necessarily by the immediate participants but by those on the periphery." The Governmental Process: Political Interests and Public Opinion (New York: A.A. Knopf, 1951) p. 394

Secrecy and censorship result in blockage of the second path, which denies citizens the information necessary for determining rational preferences. Such practices are clearly self-defeating. If it is true, for example, as elements of the press and others from time to time have suggested, that information available to the American public concerning happenings in Viet Nam (tactical information excluded) is censored and "interpreted" to elicit response favorable to Administration policies, then we are embarked on a dangerous course. Or consider the apparent suppression of evidence in the Warren Commission's report of its investigation of President Kennedy's assassination, especially the sealing of certain pertinent records for a period of 75 years. This is an unmistakable trend in the wrong direction in as much as it implies distrust of individual autonomy, subordination of the principle of supremacy of the individual, and lack of confidence in the collective judgment of the citizenry. Even the slightest acquiescence to the doctrine that government should decide what is best for the people and control their behavior accordingly, is a step toward loss of both individual and political autonomy.

Our principle equips us to wrestle with the knotty question of the degree of governmental activity in business. Henry M. Wriston captures the essence of the problem:

> The Bill of Rights was not designed for corporations; free enterprise is only one fruit of liberty, not its root. Property and business exist for the benefit of individuals and have no inherent rights.[42]

Pennington Haile is more specific, especially concerning the frequent lament over socialistic tendencies:

> We tend....to confuse resistance to "socialistic ideas" with the protection of the real freedom of the individual.... Franklin Roosevelt was cursed for introducing "socialism"

[42] Wriston, H.M., The Individual, in Goals for Americans, Op. Cit., p. 52

when he established a measure of governmental control of business. But it may well be true that only by such steps was an eventual violent revolution prevented and all that could be maintained of capitalist society preserved. Social Security was bitterly resisted at first; now we would not dispense with it if we could....Such steps that the complexity and changing nature of our society make necessary do not always make a man less free. Certainly helplessness and dependence on others do more to crush the spirit of freedom. Surely too, any tendency to stifle originality, to compel conformity, and to punish non-conformance do so....It is a hard lesson but one that must be learned -- that some yielding to a measure of socialism is the only way a free society can successfully resist the pressures that otherwise may well insure the spread of communism.[43]

What of our foreign policy, in particular, economic aid programs and participation in the United Nations? Again, Haile's thinking presents clearly the position dictated by our principles:

> One outstanding example of the misapplication of principles said to be derived from our heritage is the platform developed by the group now known in our country as the Extreme Right. Those who support it claim to be the real guardians of the true traditions of the United States. They counsel withdrawal from the United Nations, diminishing or terminating all foreign aid, giving up all negotiations with the Communist world and concentration upon the "Communist meance" here at home. Their point of view appeals to young and old and is really based on a pathetic if dangerous nostalgia for a world gone by. It represents a frontier spirit in a world without frontiers. It wants to preserve or to re-create conditions that can no longer be maintained, yet its appeal is nevertheless powerful because, if those conditions could recur, many of the problems we face would disappear. But they cannot -- isolation, self-sufficiency, security through our own armed strength belong to an age gone forever.
>
> Most of us realize this. But we do not perhaps see what a perversion of our basic principles is here involved.

[43] Haile, P., The Eagle and the Bear: The Philosophic Roots of Democracy and Communism, 2nd Ed. (New York: David McKay Company, Inc., 1965) p. 137.

> Our true heritage must impell us toward full participation in the United Nations, toward maximum economic assistance, and toward continuing negotiation even in the face of frustration. It must do so because, if man is a creature of reason, all these steps are necessary to create the very possibility of peace on an overcrowded earth, now equipped with nuclear weapons of destruction.[44]

The United Nations has neither the form nor the goal of World government. We are rightfully hesitant to surrender any significant portion of our national autonomy. But it is helping to prepare men's minds for the day when the rights of man become the only rights, and all governments are dedicated to their preservation. On this basis alone it serves our best interests and deserves our unreserved individual and National support.

Is it appropriate, in the light of our highest goals, to insist that governments receiving our economic assistance be "democratic" after our own pattern? We are naive to think that a new nation emerging suddenly from colonial subservience or primitive ignorance will survive and prosper under a system we derived under such vastly different circumstances. All we should require as a prerequisite for economic aid, and all we can hope for the future, is that men and nations will dedicate themselves to the principle of supremacy of the individual. To attempt to impose more than that of our system is itself a violation of the principle.

The means for political improvement are personal as well as institutional. Having examined briefly an assortment of American institutions, practices and policies, it is appropriate to conclude this analysis with emphasis on the individuals who direct and carry out the processes we have described. Spinoza, who was convinced that democracy is the most reasonable form of government, believed that:

> The defect of democracy is its tendency to put mediocrity into power; and there is no way of avoiding this except

[44] Ibid., p. 154

> by limiting office to men of "trained skill". Democracy has still to solve the problem of enlisting the best energies of men while giving to all alike the choice of those, among the trained and fit, by whom they wish to be ruled.[45]

Plato's writing demonstrates that public office, in his time as now, was not always awarded to those most fit:

> In simple matters, like shoe-making, we think only a specially-trained person will serve our purpose; in politics we presume that every one who knows how to get votes knows how to administer a city or state.
>
> The problem of political philosophy is to devise a method of barring incompetence and knavery from public office, and of selecting and preparing the best to rule for the common good.[46]

Santayana echoed the philosopher-king concept of Plato's Republic in his assertion that:

> The ideal government would be a synthesis of democracy and aristocracy in which only the best would rule; but every man would have an equal chance to make himself worthy to be numbered among the best.[47]

Again we see that our philosophy, far from calling for radical new solutions, reaffirms the wisdom of the ages. Philosopher-kings may be out of reach, but "there is no substitute for a system of recruitment that brings men of talent and imagination into every rank of the public service, and for a code of responsible behavior that gives them pride in their tasks".[48] This is the real need of today; for men of integrity and vision will overcome clumsy institutions and correct faulty practices. The key to this task is education -- education available equally

[45] Durant, Op. Cit., p. 195

[46] Ibid., p. 21

[47] Ibid., p. 505

[48] Rossiter, C., Op. Cit., p. 68

to all who are capable of its discipline. Then, as in Plato's Republic,

> Career will be open to talent wherever it is born. This is democracy of the schools -- a hundredfold more honest and more effective than a democracy of the polls.[49]

We might add a note of caution. Plato is not advocating technical education, for such was virtually unknown. Technical experts have their place in government as in all of life. But in positions of true leadership, technical expertise is not enough:

> ....Leadership belongs to prudence, not to expertness; rather than the bearer of a technical ability, a leader is supposed to be a man of virtue, a man of human experience, a man who knows men, who loves them, and succeeds in persuading them. Perfect order would want experts to be kept in subordinate positions under leaders who should be good men rather than good experts.[50]

Henry M. Wriston echoes our philosophy and provides motivation for allocation of every available resource to truly democratic public education:

> The basic natural resource of the United States is its people. It follows inescapably that the first goal to be pursued -- at all levels, federal, state, local, and private -- should be the development of each individual to his fullest potential.[51]

[49] Durant, Op. Cit., p. 32-33

[50] Simon, Y.R., Philosophy of Democratic Government (Chicago: The University of Chicago Press, 1951) p. 279

[51] Goals for Americans, Op. Cit., p. 53

8. Summary and Conclusions.

This thesis has attempted to use the scientific methodology of Operations Research to derive a philosophical model of man, and then, to demonstrate its application to the solution of political problems. The development led us to adopt supremacy of the individual as the headstone of any political system, with every institution and law subordinate and dedicated to that principle.

A cybernetic model, which incorporates the capability for autonomous modification of its own structure in response to changes in both internal and external environments, was presented as a suitable framework for analysis of a political system. The necessity for continual responsiveness and innovation in a political system was demonstrated by analogy to the error-correcting feedback function in a complex communications network.

Finally, an attempt was made to show that the only certain basis for net positive progress is control of decision-making processes by the freely expressed and broadly based preferences of an autonomous, informed citizenry, reflected through unobstructed feedback-like communication channels.

It is hoped that this formal development has given substance and clarity to the widely held, but vaguely understood American principles of liberty, freedom, equality, self-evident truths, inalienable rights, and human dignity. Further, it is hoped that American political institutions and methods for goal achievement have been placed in clearer perspective as means rather than ends in themselves.

One aspect of government is necessarily a power structure for making and enforcing policies and decisions concerning human behavior. We tend to concern ourselves too much with the outward manifestations of this structure, and too often not at all with control of the structure itself. It is probably safe to assume that the American political system is adequate for the present, perhaps for some time to come:

> With all its defects, it does nonetheless provide a high probability that any active and legitimate group will make itself heard effectively at some stage in the process of decision. This is no mean thing in a political system.[52]

Bit it has not been a static system. It has evolved, and by evolving it has survived. We must not allow its tangible, outward form to divert us from its true purpose. We must not only be willing to accept change when it is needed, but also plan for it. To that end, we must continually experiment, drawing on the natural diversity and creativity of the entire citizenry to suggest imaginative, new alternatives.

The writer has not succeeded in institutionalizing a suitable structure for innovation, i.e., for autonomous steering feedback. It may be sufficient simply to be aware of the need for fundamental innovation. In its absence, however, immediate and interim goals must be continually and consciously examined in the light of the one unchanging goal.

Pennington Haile illuminates the path we must follow:

> The tradition of individual freedom maintained by government to the greatest degree compatible with existing conditions can and must remain our guide....
>
> ....Man's right to reason and to investigate and interpret his world [must] be sustained for the <u>individual</u> as a free inquirer and not as one directed by the state to arrive at results in accordance with dogmatic assumption of any kind.[53]

We Americans are fortunate indeed to be heirs and participants in so magnificent an experiment. The challenge and the responsibility are as immense today as when Jefferson conceived them:

> We feel that we are acting under obligations not confined to the limits of our own society. It is impossible not to be sensible that we are acting for all mankind; that circumstances denied to others, but indulged to us, have

[52] Dahl, R.A., A Preface to Democratic Theory (Chicago: The University of Chicago Press, 1956) p. 150

[53] Haile, Op. Cit., p. 157

imposed on us the duty of proving what is the degree of freedom and self-government in which a society may venture to leave its individual members....

We exist....as standing proofs that a government, so modelled as to rest continually on the will of the whole society, is a practicable government.[54]

[54] Levy, Op. Cit., p. 21, 22

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DOCUMENT CONTROL DATA - R&D

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1. ORIGINATING ACTIVITY *(Corporate author)*
U.S. Naval Postgraduate School
Monterey, California 93940

2a. REPORT SECURITY CLASSIFICATION
UNCLASSIFIED

2b. GROUP

3. REPORT TITLE
An Application of Operations Research to American Legislation

4. DESCRIPTIVE NOTES *(Type of report and inclusive dates)*
Master's Thesis - October 1966

5. AUTHOR(S) *(Last name, first name, initial)*
Griggs, Norman E. LCDR USN

6. REPORT DATE	7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
October 1966	63	52

8a. CONTRACT OR GRANT NO.	9a. ORIGINATOR'S REPORT NUMBER(S)
b. PROJECT NO.	
c.	9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*
d.	

10. AVAILABILITY/LIMITATION NOTICES
Qualified requesters may obtain copies of this report from DDC.

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY

13. ABSTRACT

The scientific methodology of Operations Research is used to derive a philosophical model of man, and then, to demonstrate its application to the solution of American political problems. A cybernetic model is presented as a suitable framework for analysis of a political system. The necessity for continual innovation in a political system is demonstrated by analogy to the error-correcting feedback function in a communications network. Finally, it is attempted to show by probabilistic analogy that the only certain basis for net positive progress is control of decision-making processes by the freely expressed and broadly based preferences of an autonomous, informed citizenry. Throughout the paper an attempt is made to distinguish between inalterable goals on the one hand and opportune means for their attainment on the other.

14. KEY WORDS	LINK A		LINK B		LINK C	
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